

FEDERAL REGISTER

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Agencies in this issue—

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Conservation Service
Army Department
Consumer and Marketing Service
Education Office
Employment Security Bureau
Federal Aviation Agency
Federal Communications Commission
Federal Maritime Commission
Federal Power Commission
Fish and Wildlife Service
Food and Drug Administration
Housing and Home Finance Agency
Internal Revenue Service
Interstate Commerce Commission
Labor Department
Land Management Bureau
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Reclamation Bureau
Treasury Department
Wage and Hour Division

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Volume 78

UNITED STATES
STATUTES AT LARGE

[88th Cong., 2d Sess.]

Contains laws and concurrent resolutions enacted by the Congress during 1964, the twenty-fourth amendment to the Constitution, and Presidential proclamations. Included is a nu-

merical listing of bills enacted into public and private law, and a guide to the legislative history of bills enacted into public law.

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[Docket No. 1987; Amdt. 25-7]

PART 25—AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES

Stability and Stalling Characteristics Requirements for Transport Category Airplanes

The purpose of this amendment to Part 25 of the Federal Aviation Regulations is to modify certain stability and stalling characteristics requirements applicable to newly certificated transport category airplanes. It primarily deletes stick-fixed requirements and clarifies the stick force-speed relation for static longitudinal stability. For the cruise condition, the amendment reduces allowable control system friction and redefines the applicable speed range over which static stability must be demonstrated. The amendment further provides flight characteristics standards applicable in the event of failure or malfunction of automatic or power-operated flight control devices and, finally, states new lower limit criteria for discontinuing the stall demonstration in airplanes having inherent aerodynamic stall warning.

This action was published as a notice of proposed rule making (29 F.R. 1692) and circulated as Notice 64-6 dated February 4, 1964.

Currently effective Federal Aviation Regulations on this subject are a recodification of former Civil Air Regulations that included Amendment 4b-12 of CAR Part 4b (27 F.R. 2986, Mar. 30, 1962). Following adoption of Amendment 4b-12, the Aerospace Industries Association (AIA) requested reconsideration of the stability requirements there imposed on the grounds that the newly introduced stick-fixed stability requirements dictated design and were unnecessary for minimum safety. Based on these AIA comments and the experience gained subsequent to Amendment 4b-12 in the type certification of turbine-powered transport airplanes, the Agency published Notice 64-6, not only to delete the stick-fixed stability requirements, but also to provide for failure of stability augmentation devices and changes in the stability and stall demonstrations.

Notice 64-6 proposed to amend § 25.21 (formerly CAR § 4b.100) by adding a new paragraph to provide for continued safe flight and landing in the event of single failure in a stability augmentation or other automatic or power-operated device. A number of the comments received related to flight characteristics standards that should be made appli-

cable in the event of such failure. One commentator, Service Technique Aeronautique Section "Etudes Generales" of Paris, France, suggested, with meritorious appeal, that an acceptable level of degraded flight characteristics could be related to the probability of an augmentation device failure. However, due to the lack of statistics on component failure and the resultant effect on flight characteristics, and because the recommendation is beyond the scope of the notice, it cannot be given favorable consideration at the present time.

Two sets of comments submitted in response to proposed § 25.21(e) represent divergent views on standards to be applied when augmentation devices fail. The Airline Pilots Association (ALPA), questioning the reliability and operational safety of stability augmentation devices in general would, in effect, require full compliance with flight characteristics requirements to be demonstrated with all artificial aids inoperative. The AIA would not require compliance with any specific flight characteristics as long as the pilot could continue satisfactory controlled flight and landing. When an augmentation device is built into an airplane in order to meet certain flight requirements, the Agency does not propose that the airplane comply with identical requirements in the event of device failure. At the same time, neither is it the intent to leave the regulation with no meaningful minimum standard to ensure that flight characteristics following failure are not degraded to an extent affecting safety of operations. The Agency must, therefore, reject that recommendation that would tend to subvert the purpose of the proposal by setting no compliance minimum. Insofar as the other comments were based upon unreliability of specific devices, the recommendations that followed are beyond the scope of the present rule-making action since unreliability affecting airworthiness would be dealt with by corrective action as prescribed under other regulations.

Reconsideration in the light of the various comments has clarified the importance of controllability characteristics notwithstanding the failure of stability augmentation or its secondary effect on other flight characteristics. Furthermore, because the word "satisfactory", as used in the notice, erroneously suggested continued compliance with all airworthiness requirements following single device failure, § 25.21(e) has been further amended to distinguish trim, stability, and stalling from controllability characteristics. In the event of single failure of an augmentation device, new separate subparagraphs now require safe controllability at the critical limits, full controllability and maneuverability compliance within a reduced, i.e., practical, operational flight envelope,

and permit some degradation in the quality of the trim, stability, and stall flight characteristics.

Section 25.21(e) has been further amended by adding the word "malfunction" to make clear that it applies to the overly active (runaway) as well as to the inoperative devices.

The amendment to § 25.21 being made in this rule-making action concerns failures and malfunctions of stability and control devices. ALPA has submitted a petition dated April 16, 1965, that would, in effect, prohibit automatic devices that take over or directly act on the controls. While the new ALPA proposal relates to the present action, it was received after the closing date for comments on Notice 64-6 and goes beyond the scope of the notice and, therefore, will be given separate study to determine if further rule-making action is warranted.

In view of the purpose of the amendment to remove the requirement for stick-fixed stability from the regulations, the general stability section, § 25.171 (formerly CAR § 4b.150) is amended as proposed in the notice to include a provision for control feel (static stability).

Notice 64-6 proposed to amend the static longitudinal stability requirements of § 25.173 (formerly CAR § 4b.151) by deleting the elevator control surface displacement requirements from the introduction and paragraph (a), by reducing the cruising condition free return speed range contained in paragraph (b), by redefining the stick force gradient expressed in paragraph (c), and by adding a new paragraph (d) to clarify the intent of the regulations with respect to acceptable characteristics within the allowable free return airspeed range.

No comments were received on the proposed revision to § 25.173(a) and the paragraph is amended as proposed.

Because it is possible for control system friction effects to mask stability over much of the presently required speed range associated with cruise condition static longitudinal stability, Notice 64-6 proposed to amend § 25.173(b) by reducing the free return speed range from 10 percent to the lesser of 5 percent or 20 knots. With considerable justification, the AIA disagreed with this change on the grounds that there is no evidence to dictate a change and that no safety problem is involved. In support of its position, the commentator listed 8 transport category airplanes each having completely satisfactory flight characteristics, but 4 of which exceeded 5 percent. Seven of these airplanes, however, were below 6.7 percent, and the flight test data for the eighth airplane, which showed in excess of 8 percent on both push and pull sides, appears not applicable to the cruise configuration. Recognizing that the free return speed range covers various effects other than friction, and that the pro-

posed lower numerical value may represent a too-strict limit, the Agency concurs that the 5 percent or 20-knot limit is unnecessarily severe. The Agency does not agree, however, that no change is warranted. Balancing the underlying intent behind the notice, i.e., to unmask stability by reducing friction, against the well-stated considerations advanced by the AIA, and pending further experience, § 25.173(b) is amended to specify a cruise condition free return speed range of 7.5 percent.

The present § 25.173(c) quantitatively defines stick force characteristic requirements that, prior to Amendment 4b-12, were stated only in qualitative terms. On the basis of experience indicating that a minimum gradient of 1 pound per 6 knots defines a satisfactory degree of static longitudinal stability, Notice 64-6 merely proposed to state this gradient as an average that would apply to the applicable speed ranges of the four flight situations of § 25.175.

The AIA submitted a comment in response to the notice, recommending that the average slope of the curve be stable without specifying a gradient. The AIA reasoning was that satisfactory and safe flight characteristics are not a function of the magnitude of the force gradient since force gradients are not the determining factor in speed changes, and it is sufficient merely to specify that no instability exists. However, the AIA recommendation cannot be accepted because it would allow low magnitude stick forces over a large speed range so that the pilot might not readily detect speed changes by "stick feel" even at speeds beyond the friction band range. The AIA recommendation would also permit an unstable slope of the stick force curve in the applicable speed range as more fully discussed later under § 25.175.

In view of the foregoing, § 25.173(c) is amended as proposed in the notice to provide that the average gradient of the stable slope on the stick force curve be not less than 1 pound per 6 knots.

Service Technique Aeronautique, while expressing agreement with the proposed § 25.173 (b) and (c), stated that additional requirements are needed to eliminate such control system abnormalities as friction, play, and elasticity, which are annoying to the pilot and make precise trimming of the airplane difficult. Such limitations have found favor in various U.S. and foreign military and civil air regulations. The commentator further recommended that the stick force gradient be correlated to the airplane's limiting load factor so that the latter would not be exceeded upon release of the control stick in an untrimmed condition. While both points appear valid and the recommendations have merit, the matters have not been a problem in the certification of transport category airplanes. Since the recommendations go beyond the scope of the notice, the Agency cannot consider them for inclusion in the present rule-making action.

Section 25.173 is further amended as substantively proposed by adding a new

paragraph (d) that makes it acceptable for an airplane to settle on off-trim speeds within the friction range provided exceptional attention on the part of the pilot is not required to maintain desired trim speed and altitude.

Demonstration of static longitudinal stability requirements for the climb, cruise, approach, and landing conditions, as contained in § 25.175 (a) through (d) (formerly CAR §§ 4b.152-155), have been amended to delete reference to the elevator angle curve. This action meets the initial objection of the AIA that the present regulation dictates design and furthers the purpose of the amendment to delete requirements for stick-fixed stability.

Notice 64-6 proposed to amend § 25.175 (b) (formerly CAR § 4b.155) by redefining the cruising condition speed range within which the stick force curve must have a stable slope, and by further limiting the speed range to that attainable without exceeding a stick force of ± 50 pounds. In response to the Notice, the AIA recommended that the regulation further specify an "average" stable slope for each of the three cruising conditions in order to be consistent with the wording of § 25.173(c). There is no inconsistency, however, between the provisions of § 25.173(c) and § 25.175(b). As stated before, the former section describes the average stick force gradient (or degree of stability) in numerical terms, that is necessary to be designed into an airplane over the applicable speed range. The latter section states the further requirement, unchanged from the current regulation, that the stick force speed curve have a stable slope at all points within the applicable speed range. The two sections state different requirements, each of which must be met. The commentator's suggestion would not insure compliance with the "local" stable slope requirement of § 25.175(b) and, therefore, cannot be accepted.

The AIA also recommended that the proposed speed range over which § 25.175 (b) is applicable, be the lesser rather than the greater of the two listed alternatives. It was the commentator's reasoning that since the free return range had been added to the speed range, it would be reasonable to use the smaller value. However, since the intent was to insure stability demonstrations over a reasonably adequate speed range beyond the friction band, the Agency believes it necessary to specify the greater of the values, and therefore must reject the recommendation.

In response to the original AIA petition, Notice 64-6 proposed to limit the static longitudinal stability demonstration of § 25.175(b) to a speed range in which the control force does not exceed 50 pounds in place of the present regulation that limits the stick force to 50 pounds over a prescribed speed range. No comments were addressed to this proposal and the section is amended accordingly.

Agency reconsideration of the proposed § 25.175(b)(3) (formerly CAR § 4b.155(c)) has indicated a void in the requirement for demonstrating stability

in the speed range between trim speed and the landing gear extended speed (V_{LE}) when the airplane is trimmed below the V_{LE} speed. There was no intent in the proposal to change the currently effective requirement for demonstrating stability up to the V_{LE} speed. In addition, the subparagraph was inconsistent with § 25.175(b) (1) and (2) prescribing speed ranges that take into account the friction band. The reasons for demonstrating stability over a reasonable speed range beyond the friction band, and for adding free return speed range to the numerically-specified speed range, are as equally applicable to the landing gear extended as to the landing gear retracted conditions. Accordingly, § 25.175(b) (3) is further amended to eliminate the deficiencies noted and to make it consistent with the other portions of the section.

The proposed change to § 25.201(c) (2) (formerly CAR § 4b.160(c)(2)) would amend the exception clause to allow discontinuance of the stall demonstration when the magnitude and severity of an unmistakable inherent aerodynamic warning becomes a strong and effective deterrent to further speed reduction. The AIA submitted comments in opposition to this change, contending that it would reduce the level of safety provided by the present regulation. It was the AIA position that deletion of cross reference to § 25.207, which precludes unsatisfactory characteristics between stall warning and full stall, would allow declaration of the stall in or on the edge of pitchup, wing drop, etc., so that margins would not be defined between speeds to which an airplane is exposed in training and possible uncontrollability. The Agency, however, is unable to agree with the reasoning of the commentator since the criteria for determination of an acceptable unmistakable inherent aerodynamic warning have clearly been strengthened in the proposal to require a deliberate and extensive pilot effort to reduce the speed below that at which the limiting warning occurs. Furthermore, the § 25.201 proposal does not relieve compliance with § 25.207 in regard to the stall warning margin as the AIA comments seemingly imply. The Agency believes the proposed changes to § 25.201 will increase safety, and the section is amended accordingly.

In this connection, § 25.207(c) requires the stall warning to begin at a speed exceeding the stalling speed by 7 percent or some lesser margin under stated conditions. A question arises as to whether, under the amended exception clause of § 25.201(c) (2), § 25.207(c) requires the stall warning to begin at a speed exceeding the speed at which the warning becomes a strong and effective deterrent to further speed reduction. To indicate that the stall warning margin must exist above the speed demonstrated under the exception clause of § 25.201(c) (2), § 25.207(c) has been amended to clarify the stalling speed on which the margin is to be based.

Safe Flight Instrument Corporation, referencing an apparent inconsistency between § 25.201(c) (2) and § 25.207, rec-

commended that the exception clause of the former be further amended to allow artificial stall warning as an alternative to inherent aerodynamic warning to deter further speed reduction during an approach to the stall. It is assumed the "inconsistency" cited refers to the wording of § 25.207(b) that allows use of a device giving clearly distinguishable indications, whereas § 25.201(c) (2) makes no provision for artificial warning to terminate the stall demonstration. The commentator's allegation of inconsistency, however, fails to distinguish the two sections and is not well taken. Section 25.207 requires a stall warning at a margin above stall speed but optionally allows use of a device for this purpose because inherent warning may not occur at the higher speed. Section 25.201, on the other hand, requires demonstration of "inherent" airplane characteristics at the lowest speeds possible in operations. To limit the scope of the demonstration by use of artificial warning devices would be clearly incompatible with the purpose of the section. The Agency finds no inconsistencies in the two sections and therefore cannot accept the recommendation of this commentator.

A number of nonsubstantive changes have been made to clarify wording and correct inadvertent editorial omissions occurring in the notice.

Interested persons have been afforded an opportunity to participate in the making of this amendment. All relevant matter submitted has been fully considered.

(Secs. 313(a), 601, and 603 of the Federal Aviation Act of 1958; 49 U.S.C. 1354(a), 1421, 1422)

In consideration of the foregoing, Part 25 of the Federal Aviation Regulations is amended, effective November 14, 1965, as follows:

1. Section 25.21 is amended by adding a new paragraph (e) to read as follows:

§ 25.21 Proof of compliance.

(e) If compliance with the flight characteristics requirements is dependent upon a stability augmentation device, or upon any other automatic or power-operated device, it must be shown, after any single failure or malfunction of such device in flight, that—

(1) The airplane is safely controllable when the failure or malfunction occurs at any speed or altitude within the approved operating limitations that is critical for the type of failure being considered;

(2) The controllability and maneuverability requirements of this subpart are met within a practical operational flight envelope (for example, speeds, altitudes, normal accelerations, and airplane configurations); and

(3) The trim, stability, and stall characteristics are not impaired below a level needed to permit continued safe flight and landing.

2. The second sentence of § 25.171 is amended by inserting the words "and

control feel (static stability)" immediately after the words "suitable stability".

3. Section 25.173 is amended to read as follows:

§ 25.173 Static longitudinal stability.

Under the conditions specified in § 25.175, the characteristics of the elevator control forces (including friction) must be as follow:

(a) A pull must be required to obtain and maintain speeds below the specified trim speed, and a push must be required to obtain and maintain speeds above the specified trim speed. This must be shown at any speed that can be obtained except speeds higher than the landing gear or wing flap operating limit speeds or V_{FC}/M_{FC} , whichever is appropriate, or lower than the minimum speed for steady unstalled flight.

(b) The airspeed must return to within 10 percent of the original trim speed for the climb, approach, and landing conditions specified in § 25.175 (a), (c), and (d), and must return to within 7.5 percent of the original trim speed for the cruising condition specified in § 25.175(b), when the control force is slowly released from any speed within the range specified in paragraph (a) of this section.

(c) The average gradient of the stable slope of the stick force versus speed curve may not be less than 1 pound for each 6 knots.

(d) Within the free return speed range specified in paragraph (b) of this section, it is permissible for the airplane, without control forces, to stabilize on speeds above or below the desired trim speeds if exceptional attention on the part of the pilot is not required to return to and maintain the desired trim speed and altitude.

4. The first sentence of paragraphs (a), (c), and (d) of § 25.175 is amended by striking out the words "and, if required by § 25.173(a), the elevator angle curve must have stable slopes" and inserting the words "must have a stable slope" in place thereof.

5. Section 25.175(b) is amended to read as follows:

§ 25.175 Demonstration of static longitudinal stability.

(b) *Cruise.* Static longitudinal stability must be shown in the cruise condition as follows:

(1) With the landing gear retracted at high speed, the stick force curve must have a stable slope at all speeds within a range which is the greater of 15 percent of the trim speed plus the resulting free return speed range, or 50 knots plus the resulting free return speed range, above and below the trim speed (except that the speed range need not include speeds less than $1.4 V_{S1}$, nor speeds greater than V_{FC}/M_{FC} , nor speeds that require a stick force of more than 50 pounds), with—

(i) The wing flaps retracted;

(ii) The center of gravity in the most adverse position (see § 25.27);

(iii) The most critical weight between the maximum takeoff and maximum landing weights;

(iv) 75 percent of maximum continuous power for reciprocating engines or, for turbine engines, the maximum cruising power selected by the applicant as an operating limitation (see § 25.1521), except that the power need not exceed that required at V_{MO}/M_{MO} ; and

(v) The airplane trimmed for level flight with the power required in subparagraph (iv) above.

(2) With the landing gear retracted at low speed, the stick force curve must have a stable slope at all speeds within a range which is the greater of 15 percent of the trim speed plus the resulting free return speed range, or 50 knots plus the resulting free return speed range, above and below the trim speed (except that the speed range need not include speeds less than $1.4 V_{S1}$, nor speeds greater than the minimum speed of the applicable speed range prescribed in subparagraph (1), nor speeds that require a stick force of more than 50 pounds), with—

(i) Wing flaps, center of gravity position, and weight as specified in subparagraph (1) of this paragraph;

(ii) Power required for level flight at a speed equal to $\frac{V_{MO} + 1.4 V_{S1}}{2}$; and

(iii) The airplane trimmed for level flight with the power required in subparagraph (ii) above.

(3) With the landing gear extended, the stick force curve must have a stable slope at all speeds within a range which is the greater of 15 percent of the trim speed plus the resulting free return speed range, or 50 knots plus the resulting free return speed range, above and below the trim speed (except that the speed range need not include speeds less than $1.4 V_{S1}$, nor speeds greater than V_{LB} , nor speeds that require a stick force of more than 50 pounds), with—

(i) Wing flap, center of gravity position, and weight as specified in subparagraph (1);

ous power for reciprocating engines or, for turbine engines, the maximum cruising power selected by the applicant as an operating limitation, except that the power need not exceed that required for level flight at V_{LB} ; and

(ii) 75 percent of maximum continuous

(iii) The aircraft trimmed for level flight with the power required in subparagraph (ii) above.

6. Section 25.201(c) (2) is amended to read as follows:

§ 25.201 Stall demonstration.

(c) * * *

(2) The airplane is considered stalled when, at an angle of attack measurably greater than that for maximum lift, the inherent flight characteristics give a clear and distinctive indication to the pilot that the airplane is stalled, except that for airplanes demonstrating unmistakable inherent aerodynamic warning, associated with the stall in all required

configurations, of a magnitude and severity that is a strong and effective deterrent to further speed reduction, the speed need not be reduced below this value. Typical indications of a stall are a nose-down pitch, or a roll, that cannot be readily arrested, or, if clear enough, a loss of control effectiveness, an abrupt change in control force or motion, characteristic buffeting, or a distinctive vibration of the pilot's controls.

7. Section 25.207(c) is amended by inserting the parenthetical expression "(i.e., the speed at which the airplane stalls or the minimum speed demonstrated, whichever is applicable, under the provisions of § 25.201(c)(2))" immediately after the words "The stall warning must begin at a speed exceeding the stalling speed".

Issued in Washington, D.C., on October 8, 1965.

WILLIAM F. MCKEE,
Administrator.

[F.R. Doc. 65-10983; Filed, Oct. 14, 1965;
8:45 a.m.]

[Airspace Docket No. 65-CE-59]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS

Designation of Control Zone and Alteration of Transition Area; Correction

On September 1, 1965, an amendment to Part 71 of the Federal Aviation Regulations was published in the FEDERAL REGISTER (30 F.R. 11209) designating a control zone and altering a transition area in the Manitowoc, Wis., terminal area.

This amendment stated that the control zone and transition area were to become effective 0001 e.s.t., December 9, 1965. The effective date of these airspace designations was based on the completion date for the Manitowoc VOR. It has now been determined that the Manitowoc VOR is not scheduled for completion until January 6, 1966. It is therefore necessary to change the effective date of the final rule from December 9, 1965, until January 6, 1966.

Since 30 days will elapse from the time of publication of the rule, as amended, until its effective date, this change is made in compliance with section 4 of the Administrative Procedure Act.

In consideration of the foregoing, Airspace Docket No. 65-CE-59 (30 F.R. 11209) is amended as follows:

"Effective 0001 e.s.t., December 9, 1965" is deleted and "Effective 0001 e.s.t., January 6, 1966" is substituted therefor.

(Sec. 307(a) of the Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued in Kansas City, Mo., on October 4, 1965.

EDWARD C. MARSH,
Director, Central Region.

[F.R. Doc. 65-10982; Filed, Oct. 14, 1965;
8:45 a.m.]

[Airspace Docket No. 65-CE-78]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS

Designation of Control Zone and Alteration of Transition Areas; Correction

On October 5, 1965, an amendment to Part 71 of the Federal Aviation Regulations was published in the FEDERAL REGISTER (30 F.R. 12661) designating a control zone and altering transition areas in the Bible Grove, Ill., and Mattoon, Ill., terminal areas.

This amendment stated that the control zone and transition areas were to become effective December 9, 1965. The effective date of these airspace designations was based on the completion date for the Mattoon VOR. It has now been determined that the Mattoon VOR is not scheduled for completion until January 6, 1966. It is therefore necessary to change the effective date of the final rule from December 9, 1965, until January 6, 1966.

Since 30 days will elapse from the time of publication of the rule, as amended, until its effective date, this change is made in compliance with section 4 of the Administrative Procedure Act.

In consideration of the foregoing, Airspace Docket No. 65-CE-78 (30 F.R. 12661) is amended as follows:

"Effective 0001 e.s.t., December 9, 1965" is deleted and "Effective 0001 e.s.t., January 6, 1966" is substituted therefor.

(Sec. 307(a) of the Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued in Kansas City, Mo., on October 5, 1965.

DONALD S. KING,
Acting Director,
Central Region.

[F.R. Doc. 65-10984; Filed, Oct. 14, 1965;
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[Airspace Docket No. 65-CE-129]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS

Alteration of Control Zone

The purpose of this amendment to Part 71 of the Federal Aviation Regulations is to alter the Saginaw, Mich., control zone.

The Federal Aviation Agency is planning to decommission the Saginaw, Mich., L/MF radio beacon on or about December 9, 1965. Inasmuch as the Saginaw, Mich., control zone is presently designated, in part, with reference to this radio beacon, an amendment of the control zone is necessary to reflect the decommissioning of the Saginaw L/MF radio beacon. This alteration will eliminate one extension to the existing control zone.

Inasmuch as this amendment is less restrictive in nature and imposes no additional burden on any person, notice and public procedure hereon are unnecessary and the amendment may be-

come effective without regard to the 30-day statutory period.

In consideration of the foregoing, Part 71 of the Federal Aviation Regulations is amended, effective 0001 e.s.t., December 9, 1965, as hereinafter set forth.

In § 71.171 (29 F.R. 17581) the Saginaw, Mich., control zone is amended to read:

SAGINAW, MICH.

Within a 5-mile radius of Tri-City Airport (latitude 43°31'54" N., longitude 84°04'54" W.) and within 2 miles each side of the Saginaw VOR 235°, 310° and 035° radials extending from the 5-mile radius zone to 8 miles southwest, northwest, and northeast of the VOR.

(Sec. 307(a) of the Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued in Kansas City, Mo., on October 4, 1965.

EDWARD C. MARSH,
Director, Central Region.

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8:45 a.m.]

[Airspace Docket No. 65-CE-96]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS

Designation of Transition Area

On August 6, 1965, a Notice of Proposed Rule Making was published in the FEDERAL REGISTER (30 F.R. 9829) stating that the Federal Aviation Agency proposed to establish controlled airspace in the Willmar, Minnesota, terminal area.

Interested persons were afforded an opportunity to participate in the rule making through submission of comments. All comments received were favorable.

In consideration of the foregoing, Part 71 of the Federal Aviation Regulations is amended, effective 0001 e.s.t., December 9, 1965, as hereinafter set forth.

In § 71.181 (29 F.R. 17643) the following transition area is added:

WILLMAR, MINNESOTA

That airspace extending upward from 700 feet above the surface within 5 miles N and 8 miles S of the 104° and 284° bearings from Willmar, Minnesota, Municipal Airport (Lat. 45°06'52" N., Long. 95°05'11" W.), extending from 7 miles E to 13 miles W of the airport.

(Sec. 307(a) of the Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued in Kansas City, Mo., on October 4, 1965.

EDWARD C. MARSH,
Director, Central Region.

[F.R. Doc. 65-10986; Filed, Oct. 14, 1965;
8:45 a.m.]

[Airspace Docket No. 65-CE-132]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS

Alteration of Control Zone

The purpose of this amendment to Part 71 of the Federal Aviation Regula-